(3) A mechanism is suggested for the interaction of polydimethylsiloxanediols with oxygen induced by boric acid at low temperatures.

Translated by V. ALFORD

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POLYMERIZATION AND COPOLYMERIZATION OF α- AND β-CARBALKOXYVINYLPHOSPHINATES*

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CONTINUING our investigation of the polymerization and copolymerization of different esters of vinylphosphinic acid [1], in the present work we have studied the polymerization of α- and β-carbalkoxyvinylphosphinates.

The literature contains indications [2, 3] of the possibility of the polymerization and copolymerization of α-carbalkoxyvinylphosphinates, but only fragmentary information is given regarding the reaction conditions, the influence of various factors on its course and the properties of the polymers and copolymers produced.

There are two principal methods of preparing dialkoxides of α-carbalkoxyvinylphosphinic acid. In one of them [4], the dialkoxide is prepared by the reaction of triethylphosphite with the methoxide of α,β-dibromopropionic acid (b.p. 66–68°/5 mm, d_4^{20} 1·0955, n_D^{20} 1·4130), and in the other [3], via the oxidative phosphorylation of methylacrylate (b.p. 118–119°/3 mm, d_4^{20} 1·1624, n_D^{20} 1·4348). Since there is a big difference in the constants of the diethoxide prepared by the two different methods, we repeated the synthesis from the description given.

From a study of the IR spectrum and comparison of the constants with those known for phosphorus-containing products, we came to the conclusion that the

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